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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,112	07/27/2001	Steven J. Furnas	LKJ-162A	9783

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EXAMINER

LU, TOM Y

ART UNIT PAPER NUMBER

2621

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,112

Applicant(s)

FURNAS ET AL.

Examiner

Tom Y Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 2, 10, 11, 14, 20, 21, 23, 29, 30, 32, 37, 38 and 40 are rejected under 35 U.S.C. 112 2nd Paragraph.

- a. Regarding claim 2, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).
- b. Claim 10 recites the limitation "the object" in line 2. There is insufficient antecedent basis for this limitation in the claim.
- c. Claim 11, 14, 20, 21, 23, 29, 30, 32, 37, 38 and 40 are rejected for the same reason given in Claim 10.

Claim Objections

2. Claims 21, 30 and 34 are objected to because of the following informalities: unit "inches" is missing. Appropriate correction is required.

Drawings

3. The drawings are objected to because brief descriptions are missing in the figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one

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figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Petition for color drawings to be entered is not granted because it is not compliant with 37 CFR 1.84. Any such petition must include the following:

- i. The fee set forth in § 1.17(h);
- ii. Three (3) sets of color drawings;
- iii. A black and white photocopy that accurately depicts, to the extent possible, the subject matter shown in the color drawing; and An amendment to the specification to insert (unless the specification contains or has been previously amended to contain) the following language as the first paragraph of the brief description of the drawings: The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 9, 11, 12, 15 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Soenksen et al (U.S. Patent No. 6,711,283 B1).

- a. Referring to Claim 1, Soenksen discloses a method for diagnosing contaminants (a specimen or sample 12, column 7, line 3, is the claimed contaminants. For example, the sample can be abnormal cells, column 5, line 2) at remote locations (computer 44 is a remote computer on the network 42, column 13, lines 16-17) by capturing photomicrographs of the contaminants (image strips of the sample as shown in figure figures 3A and 3B are the claimed photomicrographs of the contaminants) using a digital camera (line scan camera 18 is the claimed digital camera, column 15, line 55) and transmitting said photomicrographs over electronic communication systems to certified personnel for analysis of the contaminants (the image strips are combined and transmitted through the network 42, and displayed on a display monitor 46 for analysis, column 21, lines 45-46. Note the analysis is done by a pathologist, column 2, line 20), wherein the contaminants are illuminated with a high intensity light source (light source 30 is a halogen light source, which is a high intensity light source, column 8, line 29-30) and wherein a high resolution lens magnification system is position between the camera and the contaminants (the combination of tube lens and objective lens results 20X magnification, which is high resolution lens magnification, column 9, lines 32-35. See figure 1 for positioning).

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- b. Referring to Claim 9, Soenksen discloses wherein the light source comprises at least one high intensity light bulb (column 8, line 46).
 - c. Referring to Claim 11, Soenksen discloses wherein the at least one high intensity light bulb is positioned above or beneath the object being viewed (see figure 1 for positioning).
 - d. Referring to Claim 12, Soenksen discloses a reflecting mirror proximate the bulb (a concave reflective mirror, column 8, line 31 is used to direct the light to the sample).
 - e. With regard to Claim 15, see explanation in Claim 1.
 - f. With regard to Claim 25, see explanation in Claim 1.
6. Claims 1, 5, 9, 10, 15, 16, 25, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Perkins et al (U.S. Patent No. 6,106,457).
- a. Referring to Claim 1, Perkins discloses a method for diagnosing contaminants (the contaminants in Perkins can be wart, lesion, or other type of skin disorder, column 1, line 31) at remote locations (local PC 1012, column 35, line 49, is a remote PC on a network) by capturing photomicrographs of the contaminants (image, column 35, line 53) using a digital camera (CCD or a CMOS vide camera, column 19, line 11) and transmitting said photomicrographs over electronic communication systems to certified personnel for analysis of the contaminants (images are transmitted over a local network, and reviewed by a physician, column 35, lines 45-55), wherein the contaminants are illuminated with a high intensity light source (column 9, line 57) and wherein a high resolution

lens magnification system is positioned between the camera and the contaminants (high magnification instrument head 742, column 20, line 40, which is position between the camera and the contaminant, see figure 14).

- b. Referring to Claim 5, Perkins discloses wherein the light source has a focal plane and said focal plane and lens magnification system are hand-held by an operator at a distance about 0.5 to 1.5 inches from the microscopic contaminants to be identified (objective lens at column 17, line 13 is the focal plane, and the housing 380 contains the light source and lens magnification system. The housing device is a hand-held device, which can be placed at any distance from the contaminants).
- c. Referring to Claim 9, Perkins discloses wherein the light source comprises at least one high intensity light bulb (column 9, line 57).
- d. With regard to Claim 10, see explanation in Claim 5.
- e. With regard to Claim 15, see explanation in Claim 15.
- f. With regard to Claim 16, see explanation in Claim 5.
- g. With regard to Claim 25, see explanation in Claim 1.
- h. With regard to Claim 26, see explanation in Claim 5.
- i. Referring to Claim 27, Perkins discloses wherein the digital camera, light source and lens magnification system are operated by battery power (column 10, line 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 18, 28, 30, 33, 34, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soenksen.

- a. Referring to Claim 7, the arguments in Paragraph 5 above as to the applicability of Soenksen are incorporated herein, Soenksen discloses a lens magnification system comprises a glass pickup lens (for very microscope, there is a pickup lens at the end of turret), a television tube (line scan camera focusing optics 34 as shown in figure 1), a power auxiliary lens (objective lens, column 9, line 38) and a zoom lens (tube lens, column 9, line 31) in combination, the combination not including an eyepiece focusing lens (Soenksen teaches not having any eyepieces, column 10, lines 2-3). The auxiliary lens and the television tube in Soenksen are 20X instead of 2X, however, it would have been an obvious matter of design choice to modify Soenksen reference by having 2X auxiliary lens and television tube, since applicant has not disclosed that having 2X auxiliary lens and television tube would post any significant advantages, and it appears the system would perform equally well with any times of auxiliary lens and television tube.
- b. With regard to Claim 18, see explanation in Claim 7.
- c. With regard to Claim 28, see explanation in Claim 7.
- d. Referring to Claim 30, Soenksen teaches wherein the light bulb has a focal plane and the focal plane of said at least one light bulb is on the object being viewed

when the lens magnification system is positioned at a distance from about 0.5 to 1.5 from the object (see figure 1 for positioning).

- e. With regard to Claim 33, see explanation in Claim 7.
 - f. Referring to Claim 34, Soenksen teaches wherein the combination of lens are positioned at a distance from about 0.5 to 1.5 from the microscopic contaminants being viewed (see figure 1 for the distance between the lens 16 and sample 12).
 - g. With regard to Claim 35, see explanation in Claim 9.
 - h. With regard to Claim 36, see explanation in Claim 34.
8. Claims 13, 14, 23, 24, 29, 31, 32, 37, 38, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soenksen in view of Krasieva et al (U.S. Patent No. 5,734,498), The arguments in Paragraph 5 above as to the applicability of Soenksen are incorporated herein.
- a. Referring to Claim 13, Soenksen does not teach a colored filter is positioned between contaminants being viewed and the light source and the photomicrographs of the contaminants are taken on a glass slide without staining the contaminants. Krasieva teaches a color contrast filters are placed in the light path in a microscope system to compensate the stained specimen, column 11, lines 50-63, where the light path in Soenksen is between the sample and the light source. At the time the invention was made, a person of ordinary skill in the art would have been motivated to place a color filter between the contaminants and the light source because Soenksen teaches placing a sample specimen on a motorized stage, and Krasieva teaches it is common that the specimen contains stains. By placing a color filter in the light path of the specimen and the light

source, it eliminates the stain in the image taken by a camera (column 11, lines 64-67 and column 12, lines 1-9).

- b. Referring to Claim 14, Krasieva teaches wherein the light source comprises at least one high intensity xenon light bulb located above or beneath the object being viewed (column 36, line 25, see figure 9 for positioning).
- c. With regard to Claim 23, see explanation in Claim 13.
- d. With regard to Claim 24, see explanation in Claim 14.
- e. With regard to Claim 29, see explanation in Claim 14.
- f. With regard to Claim 31, see explanation in Claim 13.
- g. With regard to Claim 32, see explanation in Claim 14.
- h. With regard to Claim 37, see explanation in Claim 14.
- i. With regard to Claim 38, see explanation in Claim 14.
- j. With regard to Claim 39, see explanation in Claim 13.
- k. With regard to Claim 40, see explanation in Claim 14.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soenksen in view of Linehop (U.S. Patent No. 5,944,532). The arguments in Paragraph 5 above as to the applicability of Soenksen are incorporated herein. Referring to Claim 2, Soenksen discloses placing a sample, such as cells under a microscope to be scanned. However, Soenksen does not teach the sample can be fungal spores and the spores are obtained from an air-sampling mechanism. Linehop teaches it is well known in the art to collect fungal spores by an air-sampling mechanism and place the spores under the microscope for analysis (column 1, lines 17-23). At the time the invention was made, a person of ordinary skill in the art would have been

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motivated to place a sample of fungal spores obtained through an air-sampling mechanism under Soenksen's microscope for analysis because Soenksen teaches using his microscope for different kinds of samples, even though, Soenksen does not explicitly cite fungal spore as one of the sample, however, it is understood the image resolution of 36,000X18,000 is capable to obtain the image of fungal spores (column 17, line 31).

10. Claims 3, 4, 8, 19, 20, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins. The arguments in Paragraph 6 above as to the applicability of Perkins are incorporated herein.

- a. Referring to Claim 3, Perkins discloses using the hand-held device to obtain images of skin anomalies. Perkins does not explicitly teach using the device to take images of molds. However, it is understood that Perkins system is capable of doing so, and Perkins at column 36, line 26, suggests his device is applicable in different areas, such as taking images of molds.
- b. With regard to Claim 4, Perkins teaches capturing images directly on pieces of carpet or ceiling tile or cotton swabs, see explanation and motivation in Claim 4.
- c. Referring to Claim 8, Perkins discloses use of a digital camera, column 11, line 13. Perkins does not teach the image resolution of the camera is at least about 400,000 pixels by 800,000 pixels. However, it is understood that the imaging device in Perkins is a stand alone device, which can be substituted as desired, and Perkins at column 11, lines 7-8, teaches any kind of sensor is applicable, therefore, at the time the invention was made, a person of ordinary skill in the art

would have been motivated to use a camera with resolution of 400,00X800,000 in Perkins to obtain even higher resolution images.

- d. With regard to Claim 19, see explanation in Claim 8.
- e. Referring to Claim 20, Perkins discloses using a halogen lamp 502, column 17, line 53 as the light source located above the object being viewed. Although, Perkins does not disclose use of xenon light bulb, it is well-known in the art that halogen and xenon light sources are substitutable.
- f. With regard to Claim 21, see explanation in Claim 5.
- g. Referring to Claim 22, Perkins teaches reflector 506 at column 17, line 53.

11. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins in view of White et al (U.S. Patent No. 4,736,826). The arguments in Paragraph 6 above as to the applicability of Perkins are incorporated herein.

- a. Referring to Claim 6, Perkins discloses wherein the digital camera, light source and lens magnification system are operated by battery power (column 10, line 40). However, Perkins does not disclose the camera, light source and lens magnification system are transported by a remote controlled vehicle into air ducts or beneath building structure. White teaches having a mobile robot as a transporter to carry equipments. At the time the invention was made, a person of ordinary skill in the art would have been motivated to use White's robot to transport Perkins's device because as White points out the robot is used in the hazardous areas, where a physician may require the assistance of robotic device to

transport equipments such as Perkin's device through a hazardous area, which can be dangerous to human beings.

- b. With regard to Claim 17, see explanation in Claim 6.

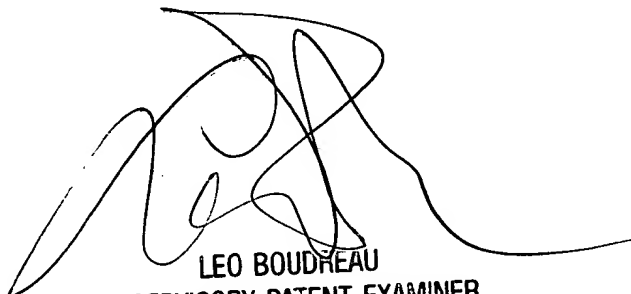
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu



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